Implications of Customer Service within the United States Coast Guard's Naval Engineering Department

by

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Dedication

To Aimee who always supported me in my goals and pushed me to achieve them, but always wonder when I would finally be done with my Master Degree.

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Abstract

Implications of Customer Service within the United States Coast Guard's Naval Engineering Department

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The customer service within the United States Coast Guard Naval Engineering department has increased significantly in the past decade. Many areas of the naval engineering departments have adopted a customer service policy in part or in whole. However, the naval engineering community is persistently working to reduce costs and operational liabilities generated through their support practices.

Financial and operational liabilities have also grown in the past decade, and the United States Coast Guard Naval Engineering department has failed to aggressively address this issue until recently. This leaves naval engineering communities who use their own version of customer service policies to adopt a standard that is compliant toward the Coast Guard's Naval Engineering force management goals. This paper looks at the history of Coast Guard Naval Engineering customer service issues, how the

engineering community has managed the issues in the past and how improvements can be made.

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Introduction

United States Coast Guard Naval Engineering department has placed more emphasis on providing quality customer service to maintain their assets more efficiently. This new atmosphere has created some change in policy impacting the Coast Guard's Naval Engineering community.

Another change that has recently occurred within the Coast Guard Naval Engineering community is an increased focus on limiting the longer term financial and operational liabilities created as a result of poor or inept customer service policies. This movement's goal is to not only limiting the financial and operational liabilities, but to allow customers to help shape the customer service policies to better accommodate their needs.

Until recently there has not been much focus on the Coast Guard Naval Engineering customer service philosophy, the focus was geared more toward providing mission statements and what services they offer instead of providing solid customer support. This paper looks at the recent history of a few Coast Guard Naval Engineering structures, their customer service policies, and the common financial and operational liabilities they generate. It also discusses a recent shift in the engineering customer service philosophy and how it might affect Coast Guard assets in the future as the fleet is modernized over the next ten to twelve years.

Recent History of Coast Guard Naval Engineering Support Commands

The Coast Guard Naval Engineering department organizational structure is currently under realignment to provide better logistical support to the fleet. The realignment is scheduled for implementation over the next several years while the fleet modernization will take ten to twelve years to complete. One of the major components to this realignment is the transformation of the Logistics unit to centralize maintenance and asset readiness using a Coast Guard wide standardized customer logistics program. [5] Even with this transformation and realignment of the logistics function, customer service will still play an integral roll in the success of the new realignment along with the impact it has on financial and operational issues.

In the past there had been many attempts to implement a standardized system in efforts to provide high quality customer service, but no Commandant instruction exists on customer service. A main concern is that all the support unit commands perform a systematically different service and therefore customer service policies were inherently different. These policies reflect more of their mission statement than an independent customer service policy. ELC Baltimore, MLCPAC, MAT, and supply chain managers have provided a systematically sound solution to meeting the customer's needs through maintenance and logistics support throughout the years. Though these are just a few branches of Naval Engineering they are the backbone of the afloat community and each branch has been an essential part in the success of the operational readiness of naval assets. ELC Baltimore, MLCPAC and OSC are attempting to control and mitigate financial and operational liabilities through sound organizational structures.

ENGINEERING LOGISTICS COMMAND (ELC)

ELC is divided into two divisions, one in ELC currently supports 27 classes of cutters encompassing over 250 cutters and 22 standard boat classes with a fleet of 800 boats. ELC also functions as the platform manager for both cutter and boat classes. The Coast Guard does not call their vessels ships, they are referred to as cutters. Any Coast Guard vessel over 65 feet in length is considered a cutter anything less is called a boat.

ELC is responsible for managing the fleet's logistical support during the life cycle of the cutter including controlling configuration management. The second division is the Coast Guard naval yard where dry-dock, contract, or dock-side maintenance and support occur. [4]

As the current cutter fleet transitions from the aging legacy assets to newer cutters and deepwater assets, ELC's future role and mission will have increased responsibilities and significant impacting roles within the Coast Guard. ELC's future will include managing the current logistical systems of the aging legacy assets along with the new deepwater cutters. ELC works closely with MLC and operational units to ensure standards are followed and the legacy cutters remain operational.

MAINTENANCE AND LOGISTICS COMMANDS (MLC)

Currently there are two Maintenance and Logistics Commands in the Coast Guard, one in Alameda California covering the western United States and Pacific Ocean called MLCPAC. The second MLC is located in is in Norfolk, VA covering the eastern United States and Atlantic Ocean called MLCLANT. Though the two are located in different areas of the United States and are governed by the same policies, they operate very differently. [2] These two MLCs are scheduled to merge into one centralized MLC in Virginia that will support the same functions but under one umbrella instead of two

within the next fiscal year. [5]

MLC's mission statement reads "MLCs provide support to all operational units and personnel within their respective areas. Services provided by the MLC include civil engineering, electronics systems, naval engineering, health and safety, legal, finance, personnel, and inspection. MLCs also have oversight for many Coast Guard units, such as Integrated Support Commands (ISCs), Civil Engineering Units (CEUs), and Support Centers."[6]

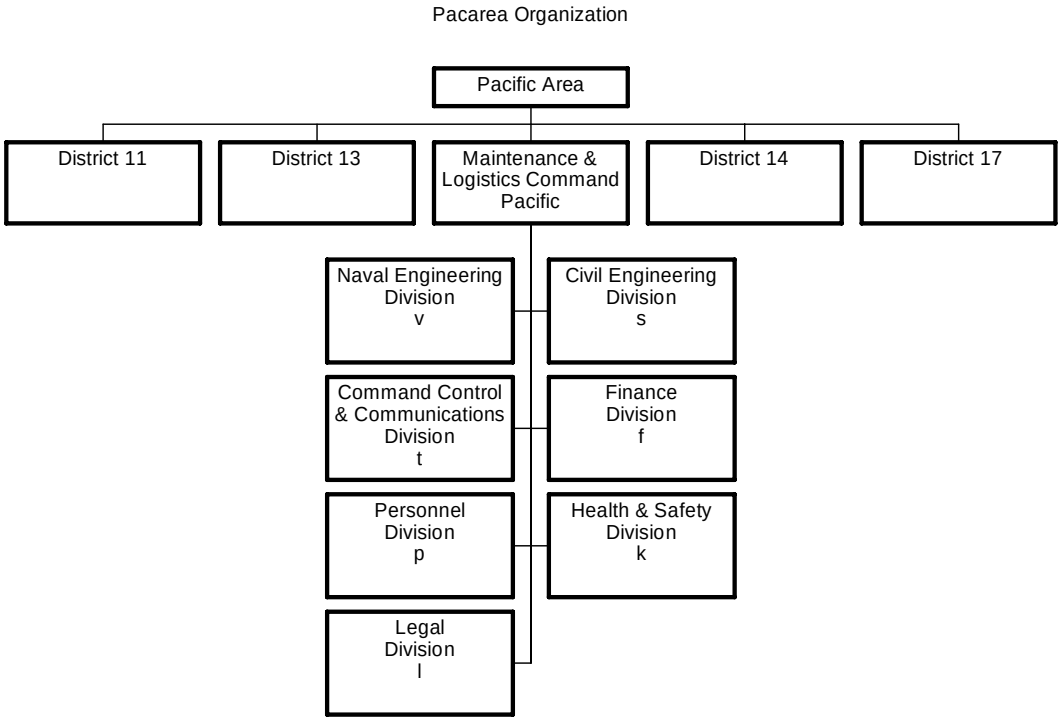

Figure 1: PACAREA Organization [6, extracted]

NAVAL ENGINEERING SUPPORT UNITS (NESU)

There are eight NESUs in the Coast Guard, three under MLCPAC and five under MLCLANT. All eight NESUs provide the depot, intermediate, and some organizational level support to all operational assets and personnel under each NESU's area of operation.

Depot level is when a high degree of maintenance or repair is requiring a major overhaul by a civilian or government contractor who has the labor, facilities, and resources to perform the work. Intermediate level is a medium scale maintenance or repair performed by contractors or Coast Guard technicians to perform work on cutters. This level of support one step lower than depot level and usually requires specialized equipment and knowledge. Organizational level maintenance is the general preventive maintenance or repair within the scope of crew members assigned to the cutters.

The depot level maintenance, repair, and logistical support is carried out by NESU Professional and Port Engineers, while the intermediate level and some selective organization level maintenance is performed by maintenance augmentation teams [6].

MAINTENANCE AUGMENTATION TEAM (MAT)

MATs have been essential to the Naval Engineering community since their establishment; they are a branch of the NESU and can reside at the NESU or reside at specific locations to allow onsite management of maintenance to their respective assets.

The MATs do the dirty work, they are the ones on the deck plate level who go onboard the cutters and assist the crew in performing organizational level maintenance. This crew augmentation is vital maintenance option to the upkeep and repair of the cutters and boats. Due to their structures not all cutters are billeted to have MAT perform work. Some classes of boats and cutters in certain Coast Guard districts do not warrant MAT support, but all nine district have at least one MAT. The nine Coast Guard districts are listed in figure 2, Coast Guard District Map.

Figure 2: Coast Guard District Map [1, extracted]

INTEGRATED DEEPWATER SYSTEMS (IDS)

The Coast Guard's definition of deepwater is any asset that operates more than 50 miles off shore for any extended period of time. IDS is a Coast Guard 25 year $17 billion program designed to modernize and replace aging cutters and aircraft including essential command control and logistics systems within the organization. The new Coast Guard IDS assets include early development of the National Security Cutter (NSC) followed by the Maritime Patrol Aircraft, Fast Response Cutter, and the Vertical Unmanned Air Vehicle.

Deepwater will provide improved automation, reducing operator workload, training requirements, and enabling condition-based monitoring. It will also integrate

Product Data Environment by maintaining a single, authoritative data set program-wide for program performance and metrics. Equipment selection, supporting, and training will be based on reliability, maintainability and availability improving readiness. Deepwater will rely on the MLC, NESU, ELC, and OSC to continue their support in order to be successful throughout the deepwater transition beginning with the new NSCs.

ORGANIZATIONAL SUPPLY COMMAND (OSC)

Commissioned in 1991, OSC is an integral part of the Coast Guard Naval Engineering Platform management; they manage and control the supply and life cycle management of all Coast Guard cutter and small boats. The OSC "develops fields, maintains and provides user support for Coast Guard enterprise information systems to improve Coast Guard mission performance through the innovative application of technology." [22]

They also manage the software and technology to track and mange the logistics and finances. The Fleet logistics system (FLS) and Configuration Management Project (CM Plus) are two vital naval engineering tools used for configuration and maintenance standards. All Naval Engineering support units such as; MLC, ELC, NESU, and MAT teams are integrated together through FLS and CM Plus.

Customer Service Policies

Customer Service is often stated in a variety of ways and many people have their own definition for what customer service actually stands for. Thousands of books, articles, manuscripts and training aids just to name a few have been written describing what customer service is and how to implement it. Customer service should not be a difficult phrase to define nor implement. [9]

Customer service from a Coast Guard maintenance stand point is performing the services your unit provides with no exceptions. Provide top quality service by looking ahead and anticipating issues such as; resolving conflicts with parts, scheduling, funding, systems, or personnel. The operation unit's expectations should be that their assigned support unit will leave the unit better than they found it. They will perform their service to the best of their ability and do everything possible to support the cutter and mission. The people performing the maintenance and services should be properly trained, experienced and looking out for the best interest of the Coast Guard as a whole which includes mission first, not home by 5 o'clock, beer at six mentality.

A customer service policy should be geared towards serving the customer the best way possible. All organizations provide both internal and external types of service and the Coast Guard is just another example to prove the point. The external customers are the tax payers who in return receive a number of services. Some of the services the Coast Guard provides are search and rescue, aids to navigation, ice patrols, maritime safety, oil spill response, drug interdiction and immigration enforcement.

The internal customer service happens on all levels between and on or off units; however, the focus here is on the customer service level between support units and the

cutters and boats they support. In order for the Coast Guard to provide the external services efficiently and effectively their operational assets must be fully operational. In order to do this the right way a customer service policy needs to exist to clearly define who the customer is, their needs, and the process to support them, and there must be adaptive to feedback from the customer. [10]

To provide the internal maintenance level customer support Coast Guard cutters and boats are individually taxed 10% of their annual operating budget. The tax helps pay for the services of ELC, NESU, OSC, MLC and MAT teams. This tax helps augment the cost of operating these support units by paying for casualty repair items, depot level maintenance, technical assistance, and specific maintenance training. Since the units are being taxed from an already inadequate operating budget, their expectation of support has increased immensely.

Not only has expectation of support increased, the oversight of support units has become an issue due to the rise in substandard performance. The cutters are being taxed to have specific maintenance and services performed by support units, but their customer service have been deteriorating over the years. In some case the service has been bad enough the cutters will often self contract specific maintenance or repair in order to control the type of customer service they receive. The customer service of support units has deteriorated over the years to a point where a cutter is willing to absorb the loss; basically the cutters are paying twice for a service in order to get what they need done.

Modernization is coming but that is still ten to twelve years out. The problems still remain and as the legacy assets grow older, parts are becoming more scarce, technicians for older systems more rare, and the money required to maintain them continues to rise at astronomical rates. Though these cutters are old they still have to

support the mission until the IDS and the new cutters begin replacing them in around 2020. The customer service required to maintain them needs to be effective and efficient and have the answers not the “I can’t help you!” response or “the lead time is 20 weeks out!” reply that cutters often hear.

The Coast Guard is a government agency but civilian companies today are looking at anyway they can to increase market share. One of the best ways to increase the probability of significantly increasing market shares is through solid customer service. When you are competing to sell the same product as a competitor, one way to get a leg up is through a customer service department that is superior to your competitor.

A government agency such as the Coast Guard has a tougher task with customer service for a variety of reasons. Number one is that there are virtually no competitors to force them to adopt a true customer service policy. A conundrum occurs identifying the best way to approach a solution: adopt a standard policy or independently improve each unit’s policies. Coast Guard Head Quarters the Naval Engineering office (CG-451) needs to find a way to resolve the current issues of customer support issues among its units. CG-451 needs to address several issues such as solid customer service, policy alignment, and accountability.

POLICY STANDARDIZATION

Standardizing a customer service policy in the Coast Guard would allow personnel to use, incorporate, and enforce the policy to achieve the common goal of keeping the Coast Guard “Semper Paratus” (always ready). The MLCs, NESUs, MATs, ELC, and OSC are not in alignment with each other but yet serve the same customers. Independently each unit has a customer service policy, but they apply them differently. For example, NESU policy is at the very least communicate via e-mail or phone when a

cutter arrives at home port for any immediate assistance; a common courtesy call to see how everything is. This sounds relatively simple and good form of customer service. Most MATs however mandate an onsite greeting achieving the same goal. There are two units providing a service but their practices are different.

The individual customer service policies of MLC, NESU ELC and OSC are built around their mission statements. Building a policy around a mission statement is not a bad thing; but if all the mission statements are different, the customer service policies will differ and so will the service. To illustrate this example ELC policy is to “deliver the right parts, information and service support at the right time, place and cost to maximize our customer's operational capability and effectiveness” [4] and MLC’s policy is to “provide the Coast Guard Pacific Fleet the most materiel readiness for every dollar and resource hour we expend.”[6] Not only are these two not the same they do not follow their own policies. MLC and ELC do have good intentions but the differences are shown through their action of implementing these polices.

ELC recognized that they were no longer able to support the 378 high endurance cutters marine surf boats and their associated davits. The boats, parts, technical support was no longer readily available and failure rates on the equipment were higher than normal. Lead times for parts were no longer in days or weeks but several months and a replacement of both were needed.

ELC decide to move towards a new more efficient and effective small boat from Zodiac called the Mark III. The new Mark III small boat’s associated davit would be the new Welin-Lambie twin pivot arm davit. This davit is a high performance self contained davit with historically low failure rate. Any overall or replacement due to failure would be simple because it would involve a one for one swap of the complete self contained

unit. This would involve unbolting one davit, craning it off and then crane on the new ready for issue davit. Replacement time would be in hours versus weeks.

This concept was good; however only three years into the replacement parts availability of the internal components are not in days or weeks but months. Parts are not kept on the shelf in ELC's parts and supply center, instead they are built as needed by the Welin–Lambie manufacturer in the United Kingdom. So ELC's did not follow their own policy of deliver the right parts, and service support at the right time, place and cost to maximize our customer's operational capability and effectiveness" [4] as they so proudly display on their website.

MLC has not been much better in following their customer service policy either. Their policy is "most materiel readiness for every dollar and resource hour we expend" [6]. MLC provides contract specifications and contract support to cutters during depot level maintenance such as dry-docks and dockside availabilities. The only difference of the two is in a dry dock the cutter is pulled from the water and sits high and dry on wood and concrete blocks. During a dockside the cutter remains in the water moored to the dock during the maintenance period.

During these availabilities contract specifications are written by MLC and reviewed during a 48 week process and changes are made along the way, a typical specification has about three solid reviews by the professional engineer, cutter crew, and contracting officer. These reviews cost many resource and man-hours to ensure the specification are right. If any changes need to be made they are sent to the specification writer for updating the contract specification prior to the contract being sent out for bid and awarded. This was the case during the CGC HAMILTON's 2006 dry-dock.

The CGC HAMILTON's 2006 availability was awarded the BAE shipyard in San Diego California for almost $2 million. During the contract several specifications involving valves renewal, square footage for hull plating renewal, and painting to name a few were wrong. Further review found all the correct changes were submitted to the specification branch to be updated in the final bid package. To make the corrections of a specification during a dry dock, the growth work is upwards and sometimes over 200% of the price had it been in the original contract. These items cost the Coast Guard and United States tax payers over $200, 000 because someone failed to perform the correct work.

Mistakes happen but at MLC this was an example of how they failed to live up to their stated policy of having "the most materiel readiness for every dollar and resource hour we expend." [6] This is a common occurrence at MLC with availabilities and can be traced back for decades and is still happing today, most recently during the CGC MUNRO's 2009 dockside.

Two things should take place across the naval engineering community; one is there should be a standardized customer service policy clearly defined and two a way to effectively enforce the policy within the organization. [11] The Coast Guard does not currently have a standardized or enforceable customer service policy throughout the agency and amazingly there is no push to establish one.

POLICY ENFORCEMENT

MLC, NESU ELC and OSC all have customer service satisfaction surveys available to their customers; this is great, but rarely does change come from the comments. Disciplinary action or accolades occur due to comments cards, but that is internal to the support units.

The fact is there is a lack of oversight throughout the Coast Guard naval engineering community. At Coast Guard Head Quarters the Naval Engineering office (CG-451) is in charge of overseeing of the naval engineering units and engineering assets. One of their jobs is to watch over the engineering community and enforce commandant policies. This is challenging issue because there is no standard customer service policy; there is no standard to enforce.

More accountability is needed on the naval engineering support level. These units need to be held accountable for negligence and incompetent acts. Operational units and cutters are held accountable for their negligence and incompetent so the question is where is the policy enforcement for support units such as ELC, NESU, MLC and OSC?

When a cutter submits a customer satisfaction survey it is ineffective unless an individual or group takes the initiative to correct the stated deficiencies or improve standard processes based on positive feedback. Their inability to hold support units accountable is a big source of dissatisfaction among cutters and small boats. The reason there is growing frustration with the cutter fleet is that the support units are suppose to support the cutter. They are also the platform manager and hold the cutter accountable financially for any platform management discrepancies or mismanagement. The cutters do not feel they have much recourse when their customer service units are not providing them services.

Imagine a person not getting the desired customer service from a particular cable or phone company; they would just switch from one carrier to another who provided better customer support at the same price. If a person went shopping at Home depot and no one would assist them in locating materials in the store or provide technical assistance about a product, but the Lowes across the street would, then they would switch stores.

The customer would not accept an employee of the company chastising them for entering the store the wrong way or failure load a shopping cart in a specific order. The Men and Women in the Coast Guard cannot walk across the street and choose another organization. They must use Naval engineering support units such as ELC, NESUs, OSC, and MLCs to manage their platform support.

ESTABLISHING ONE STANDARD

Coast Guard Head Quarters the Naval Engineering office (CG-451) needs to find a way to resolve the current issues of customer support issues among its units. CG-451 needs to address several issues of solid customer service for legacy assets while keeping an eye forward as the Coast Guard modernizes over the next ten to twelve years.

As the Coast Guard transitions towards modernization legacy assets will still be in service and require specialized maintenance and support. The need to develop and restructure customer service policies is at an important stage of the modernization process. Since there will be a mix of new cutters, legacy cutters and Integrated deepwater cutters, the need to standardized a customer service policy is critical to ensure all cutters receive the service and support required.

The next question is how? To change an entire organization's policy or in this case add an untested policy which would require the entire Coast Guard to comply with the policy would be unrealistic. The idea is to look at a unit such as an individual NESU and pilot a customer service program and policy. Each unit has a group of assigned cutters or boats, this would allow the units customer service support to be tracked and monitored over a period of three years. The three years would allow most of the maintenance processes a cutter performs such as a dockside or dry dock availability to be reviewed for efficiency and effectiveness. Casualty repairs and maintenance would also

be tracked and measured against the current process being performed elsewhere in the fleet.

One standard pilot program could be operated out of NESU Seattle, the unit is large enough that the pilot program could be run along side their existing policy and procedures to have an effective monitoring system. Of all the cutters NESU Seattle supports they have at least two of each class. Since there are two 378 foot high endurance in Seattle one cutter would be given to the pilot program and they would remain under their care for three years.

The idea behind the pilot program is to show that instead of reorganizing the MLC branches, the Coast Guard should be looking to redesign how teams are assemble to perform specific work on units. The legacy assets such as the 378 foot high endurance cutter would provide a great platform for a pilot program to support such a change without having to reorganize and restructure the entire Coast Guard Naval engineering department. The pilot program could involve only a few critical propulsion items on the 378s making it easier to get a good measurement on the success or failure of the program.

GROWTH OF CUSTOMER SERVICE POLICY

Though there is not a push to create one standardized customer service policy for the Coast Guard, the Coast Guard restructuring will incorporate a system of changes that will generate more accountability. Units will be more accountable to their customers just as their customers are accountable for their assets. Without support systems functioning properly cutters and boats generate greater financial and operational liabilities to the Coast Guard. When assets are not fully operational or require more than their periodic maintenance, due to inadequate maintenance, mismanagement of logistics, platform management, or funding support, the policies governing the unit support procedures need

to be revisited. When customer service in the Coast Guard falls short, significant financial and operational liabilities occur due inabilities to stay on schedule with proper planning and execution.

Coast Guard's Pacific Area (PACAREA) Command has an effort under way to improve maintenance practices for WHEC legacy assets. PACAREA recognized that a different approach to maintaining and sustaining legacy cutters is needed. The first process is to undertake an initiative called new business rules and strategies. This initiative is designed to better support the 378-foot cutter maintenance and platform management through 2016. [26]

A good policy will directly reflect the answers to three defining questions, the first question to ask the customer is what do you want? The next question is what do they see in the process that prevents them from receiving what they want or need? The third question should be, from their personal opinion what do they see that their customer service providers do best? [10] These three questions build on satisfaction. If the customer is satisfied, then usually they are receiving the right level of service. The answers to these questions also allow the support units to build on what is working well in the customer service process. If the support units can build on the working functions of the support practices, the ability to manage and control financial and operational liabilities exists.

Financial and Operational Liabilities

The Coast Guard reached a critical point in the early 1990s due to its aging fleet. With over 200 sea going legacy assets between 20 to 40 years old maintenance cost were beginning to take a financial toll on the Coast Guard's shrinking budget. To keep the cutters operational and underway more maintenance funding was needed than the Coast Guard was able to provide. This funding short fall began impacting cutter operational commitments. The Coast Guard needed to make drastic upgrades and modernization to its assets to remain "Semper Paratus". In 1993 the Coast Guard realized it needed to move forward to begin a process to recapitalize deepwater assets.

In November 1995, the Coast Guard's engineering division completed a Deepwater Mission Analysis Project to assess replacing deepwater cutters. After reviewing the estimated life expectancy and current condition of all Coast Guard Deep water cutters and aircraft, a shocking discovery was made. With the exception of the thirteen 270-foot medium endurance cutters, the legacy assets where all approaching the end of their life span

The Coast Guard is embarking on a historic journey to replace aging cutters in the fleet; but if the customer service practices of the past do not get resolved then the new and future cutters will suffer the same poor maintenance support issues of the old ones. The lack of research, planning, oversight and failure to see red flags as the modernization project moves forward will lead to long-term affects for the organization. The same will be said regarding the customer service policies that surround the modernization of Coast Guard cutters.

OPERATIONAL READINESS

Operational readiness is one of the most critical aspects of the Coast Guard. When a Coast Guard asset is non-operational or is mission limited, more stress is generated on other assets to complete or perform their mission. WHECs are 30 year old cutters that require a lot of maintenance on very old hulls and equipment. The 378 feet cutters have many antiquated systems, no longer supported through ELC. Many off-the-shelf parts no longer exist for equipment and systems onboard the cutters. Water tight integrity for some of cutters is becoming an increasing visible issue fleet wide. Dilapidated hull and systems are also increasing at an alarming rate.

A 193 day contract was awarded costing between $10 to $15 million dollars in order to make two WHECs fully operational and mission ready. Cmdr. Jon Gage, chief, Vessel Support Branch, Coast Guard Maintenance and Logistics Command Atlantic stated that “These cutters, which are over 40 years old, have been maintained and operated beyond their original service life.” He also said “This extensive availability will help restore the cutter’s structure to rapidly return these cutters to operational service.” This $15 million contract is straining an already stretched Naval Engineering budget causing other support to have significant budget constraints.

The $15 million to perform two major dry dock maintenance surgeries on two cutters significantly cuts funding to other cutters leaving them with a short fall to fund original dockside and dry dock availabilities packages. By cutting necessary depot level maintenance of other cutters the Coast Guard raised the risk of failures occurring during operational missions.

BUDGETING CONSTRAINTS

When poor job performance by a MAT, ELC NESU or MLC division occurs it affects the Coast Guard financially by requiring more funding to correct maintenance deficiencies. These maintenance funding increases are pulled from other cutter maintenance projects. Due to time constraints to keep the cutters and boats fully operational some maintenance expenditures can cost over 200% of the normal price.

A major component of MLC's customer service policy is to provide the cutters with an adequate amount of time to perform organizational, intermediate and depot level maintenance. This maintenance can be performed by the ship or boat crew, Coast Guard support units such as NESU, MAT or ELC, or contracted labor. The problem with scheduling and completing maintenance is that the amount of time needed to perform maintenance tasks is not being met. With a higher level of operation tempo, there has been a significant increase in deferred maintenance since 2002. Table-1 shows the deferred maintenance cost for the years 2002-2004. These deferred costs drive budget constraints for the next fiscal year to the breaking point every year with no end in sight for legacy assets until 2020. Not only is the cost significant, the operational impact of the deferred maintenance is even greater.

Table 3: Estimated Costs for Deferred Maintenance of Deepwater Legacy Aircraft and Cutters, Fiscal Years 2002-2004

Deepwater asset	Fiscal year 2002	Fiscal year 2003	Fiscal year 2004
HC-130	$4,691,000	$7,016,000	$5,737,000
HU-25	0	$201,000	0
HH-60	$7,630,000	$9,436,000	$18,824,000
HH-65	0	0	0
Subtotal for aircraft	$12,321,000	$16,653,000	$24,561,000
378-foot cutters	$2,556,000	$8,135,000	$3,000,000
270-foot cutters	$2,070,000	$870,000	0
210-foot cutters	$786,000	$1,137,000	0
110-foot patrol boats	$1,618,000	$1,961,000	$500,000
Subtotal for cutters	$7,030,000	$12,103,000	$3,500,000
Total for all deepwater legacy assets	$19,351,000	$28,756,000	$28,061,000

Source: U.S. Coast Guard

Table 1: MNS (Performance Gap) [25, extracted]

MAINTENANCE IMPACT

MLCs and ELC have been given the perception by the fleet that operational commitments have trumped the maintenance needs of the cutters and boats. The inability for the cutter fleet to perform and meet their operational commitments due to maintenance has been partially offset by deferred maintenance on a 30 plus year old platforms. MLC and ELC have a daunting task of providing the service needed to put the legacy assets were Department of Homeland Security (DHS) requires. Both units' support mission is to provide the service to ensure the vessels are fully mission ready.

Properly performed maintenance and platform support is vital to the operational readiness of the Coast Guard. The performance of legacy assets has entered a significant decline and the Coast Guard is well below the DHS requirements of capacity and performance. The performance gap shown below in figure 3 capability needed to meet the DHS requirement and the Coast Guard's past performance targets.

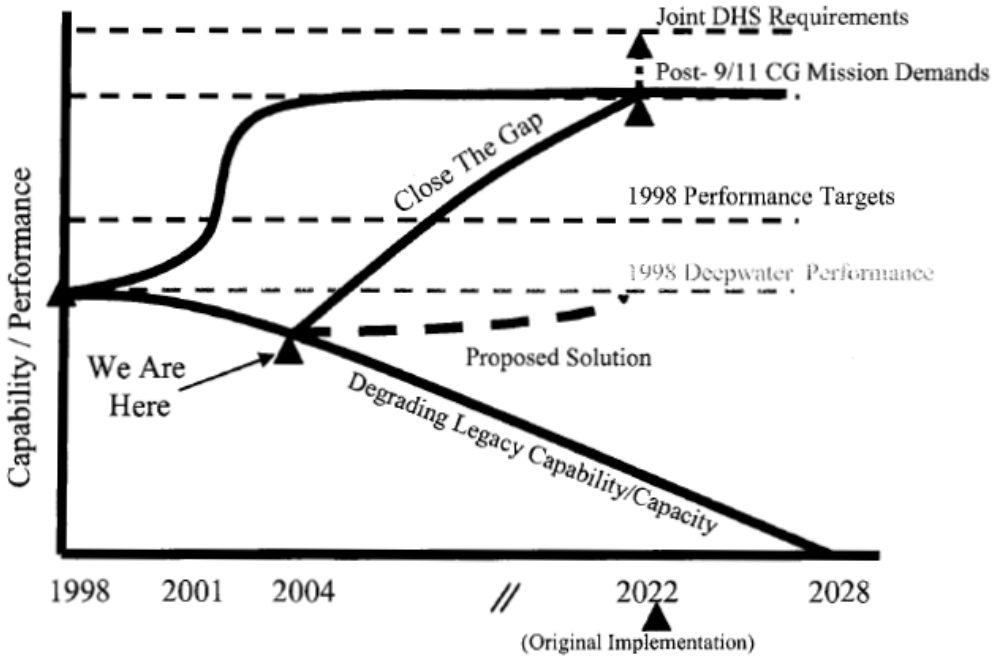

Figure 3: MNS (Performance Gap) [24, extracted]

Some of the systems typically impacted by deferred maintenance are propulsion and auxiliary systems. These systems are expensive to repair and not performing scheduled maintenance only creates the potential for failure while deployed on a mission. These are just a few issues but they illustrate how poor customer service can impact maintenance.

CUTTER STANDARDIZATION

With IDS coming online, cutter standardization should become more of an intense focus than in the past. Though the new 87 foot Patrol Boats (WPB), 175 and 225 foot Buoy Tenders (WLB) are not part of IDS they will fall under the new Coast Guard realignment. Realigning the maintenance support and standardizing cutters is not a new

concept, this has been one of ELC's main functions since their inception. Failure to keep the fleet standardized has cost the Coast Guard billions of dollars over the years.

ELC has a second chance to do this right with not only IDS, but the new WPB and WLB as well. Preventing people from making changes and additions to a cutter has always been a challenge. This is where the customers need some oversight, because de-standardizing a class of cutters over time will create long lasting impacts on maintenance, budget constraints, and platform management.

The ability to keep cutters alike will increase operational readiness of the crew as personnel transfer from unit to unit keeping a higher level of consistency. Standardized systems updated together via software or physical changes will allow faster repair times. Technicians and technical representatives are able to follow trends analysis across systems and will have one set of updated publications and drawings applicable to a standard class of cutters rather than a different set for every cutter in a specific class. Engineering support functions would be able to transform to a more systematic approach for maintenance and repairs.

ENGINEERING SUPPORT

Engineering support is either preventive or reactive. Most of the work performed on cutters should be preventive maintenance with reactive maintenance only as equipment and hull casualties occur. The Engineering workforce has moved toward an almost strictly reactive process with the big ticket preventive maintenance and inspection items mixed in. What is happening here is all critical maintenance to keep the cutter fleet moving is being performed by Coast Guard maintenance support services and sometimes it is contracted out to specialized civilian technicians. Assurances need to be in place so

more accountability moves from the cutter to the support units as the work performed on the cutter continues to rise.

Changes in Customer Service Philosophy

During OSC's realignment of their supply chain management system, one significant move has been to remove any remaining stock items (i.e. parts and equipment) from cutter's onboard supply and out of storage buildings that are not being used within a prescribed period of time and place them all in one controlled location. This allows cutters to see all parts in the location via the web and procure the part if available for free with no shipping cost.

ENGINEERING LOGISTICS COMMAND (ELC) BALTIMORE

ELC is changing their business model to accommodate and reflect the necessary support of legacy, deepwater, and newer cutter and boat classes within the fleet. The new 419 NSC and IDS will use the aviation model to manage the deepwater fleet as the aviation community does. The foreseeable issues are aircraft cannot fly if they are down for repair; however a ship can sometimes operate with limited capabilities when needed. The issues of deferring maintenance will once again be an issue. [25]

ELC is moving away from complete legacy asset standardization on some systems. The advantage to this is it allows the customer to receive new and more efficient systems; however they still have not solved the parts issue. New equipment part availability still has issues with long lead time of several months or even years from the manufacturer. Having the ability to pull the trigger on the purchase of a new system is great for providing the legacy fleet with increased the cutters operational readiness and even reduce cost; however, if the cutter cannot receive spare parts in a reasonable time frame then the issue really has not been resolved. This will require more technical savvy

and motivated support people in place to ensure cutters receive the right equipment to support Coast Guard missions.

NAVAL ENGINEERING SUPPORT UNIT (NESU)

Fleet sustainment 2016 has now been moved to 2020 placing more strain on legacy assets that have reached the end of their service life. An engineering approach is to take personal ownership of the equipment on cutters and boats as if they were their own. Since MAT teams are there to augment crews, they should be provided increased man power to adequately support a cutter and truly augment the crew.

The NESU is changing their way of providing customer service along with other Coast Guard units. Some NESUs such as Alameda and Seattle are moving towards a values process. This is a tough challenge because all the NESUs people, MAT personnel included, repair the cutters. A new approach on the IDS NSC cutters is to do away with a traditional MAT and have three engineering crews rotate throughout the year. Since the crews receive orders from the NSCs they will have the ownership portion normally missing from the customer support side of the house. As the other crews stay behind they will perform the maintenance and repairs once the cutter returns to homeport. The idea is to rotate the crews in a way that maximizes customer service support while reducing crew fatigue. The CGC BERTHOFF is the first cutter to receive this type of engineering support, so future analysis will show if this is a successful move. The fact that the NESU and Coast Guard are moving in this direction shows their effort to grow with the changes of the Coast Guard.

MAINTENANCE LOGISTICS COMMAND PACIFIC AREA (MLCPAC)

MLCPAC is changing all together and as they merge with MLCLANT into one department wide MLC. The Coast Guard's new MLC will ensure one standardized

approach to logistics and support functions. [13] One Coast Guard wide MLC will be positioned to offer a more consistent and efficient management, support, and logistical services.

The merger will be one of the largest maintenance logistics realignments in the MLCs where established. The Coast Guard is aligning two area groups of knowledge under one roof to provide better service to the fleet and manage IDS. Future business practices and customer support to the fleet will have unknown learning curve as two MLCs merge.

Conclusion

The Coast Guard is one of the oldest sea-going services in America, but with the change of technology and rising education level of employees, things need to change within the service department. The Coast Guard needs to move towards a single standard service policy or direct units to manage and enforce the unit's customer service programs and hold them accountable. Accountability will not make every thing right with the Coast Guard; however it will help mitigate financial and operational liabilities when people perform their duties and responsibilities correctly. In the end a customer service oversight department may be needed in the future to ensure the Coast Guard cutter fleet receives quality customer service.

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Vita

William Brian Winburn was born on July 17, 1972 in Dallas, Texas. He was raised by his parents Diane and Ted Fina and had the opportunity to learn many engineering trades as a child. In 1996 he enlisted into the United States Coast Guard and became and Electronics technician. He went to College at University of Phoenix where he was awarded a B.S. in Business Administration. He attended and graduated OCS in 2001 after which he has spent more than 10 years working in the Naval Engineering community and now works as the Engineering Officer on the Coast Guard Cutter MUNRO out of Kodiak Alaska.

Brian and his wife Aimee have been married for 10 years. They have two children, Rachel and Sam.

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